

Microregional convergence through social innovation

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SUMMARY

The national and international literature pays increasing attention to the research of social innovation and its impacts. Among the areas to be examined, we deal with the issues of measurability within the framework of the study. The conceptualization of social innovation, the determination of the logic of the social innovation process and the definition of its measurement levels, and modeling based on empirical research are relevant challenges. However, the different sources dealing with the topic examine these issues in a different approach. The purpose of the study is to investigate the social innovation endeavours of a district to be developed by a complex program. Nyírbátor District includes disadvantaged settlements that are facing numerous problems due to their peripheral position. The challenges of the area (migration, ageing, unemployment and scarce financial resources) mean doubly disadvantageous stigmatization for these settlements. On the one hand, they mean an external negative judgment, and on the other hand, an internal stigmatization processes of local inhabitants, which require the exact identification of local needs and the involvement of the inhabitants in decisions. One of the tools of such initiatives can be social innovation, and also the support of social innovation endeavours. Within the framework of the research, we examine social innovation as a process of creative cooperation, during which we pay special attention to the analysis of social initiatives supported by local governments. The social innovation endeavours presented in the framework of the study are multi-stakeholder initiatives based on the involvement of the local population.. Their good practice analysis makes it possible to map the process of social innovation. The purpose of this study is to present the points of focus that serve as potential activating factors for the endeavours in the case of Nyírbátor District. The examined cases play a significant role in managing the unfavourable processes of the area, and their adaptation as best practices can support the process of catching up. The study also defines the main sets of criteria which, in addition to providing a structured record of individual case studies, help to compare good practices.

Keywords: social innovation, disadvantaged area, periphery, stigmatization, good practice

Journal of Economic Literature (JEL) codes: O18, R23

DOI: <http://doi.org/10.18096/TMP.2021.01.06>

INTRODUCTION

Nowadays society is facing numerous challenges. Uncertainty, crises, unforeseeable technological changes and globalization make the future unpredictable (Ionescu, 2015). The conceptualization question of social innovation is a task that should be emphasized, and it also facilitates the management of social challenges. The process of social innovation makes societies more sustainable and cohesive through inclusive solutions, collaborations and proactive, grassroots initiatives (Grimm et al., 2013) It does not only mean bottom-up efforts and processes based on

the inclusion of citizens, since social innovations that could also be identified in novel cooperations and the restructuring of society, are often created from the top, as a result of macro level measures (Nemes-Varga, 2015). The concept of social innovation focuses on satisfying the needs of the community, and through this process the development of the quality of life and the increase in welfare/well-being are also implemented (Hazel-Onaga, 2003; Mulgan et al., 2007; Pol-Ville, 2009; Kocziszky et al. 2015).

Social innovation endeavours are emerging as a new tool for helping disadvantaged areas to catch up. Benedek et al. (2016) identify social innovation as a new means of solving economic and social problems.

Nagy and Piskóti (2016) emphasize the importance of innovative collaborations which could mean regional development, support for local communities and the integration of local products. Several basic problems of the economy and society, such as population decline, unemployment, migration or lagging areas, require long-term solutions relying on novel cooperation between the actors of society, the direct, voluntary participation of citizens in decision-making processes, and the implementation of social innovation endeavours. The concept of social innovation focuses on satisfying the needs of the community, and this process also brings about an improvement of the quality of life and an increase in welfare/well-being. Apart from the income levels determining welfare and the necessities of life, well-being is also related to the sense of security, self-esteem and a need for relationships (Kocziszky et al., 2015).

Social innovation solutions play a prominent role in the lives of decision-makers, politicians, researchers, civil society organisations, and individuals as well. In spite of the increasing attention it attracts, the concept is not yet uniformly established. In certain interpretations the concept of social innovation is strongly fragmented (Pol-Ville, 2009; Dawson and Daniel, 2010; Cajaiba-Santana, 2014, P. van der Have-Rubalcaba, 2016). Raasch et al. (2013) emphasize that the most significant challenge in conceptualization is how to make up for the lack of clearly defined boundaries in individual approaches and research goals.

LITERATURE REVIEW

In our literature review we give special attention to clarifying the relationship between social innovation and technical and economic innovation. The reason for this is that, in our view, technological and economic innovations are not able to give a comprehensive response to all the social challenges. Social challenges that require long-term solutions (e.g. unemployment, migration, disadvantaged areas) demand novel social cooperations. Social innovation is a necessary step to enhance development and competitiveness, in which the role of innovators is significant. The innovators are members of the local community, or in a broader sense, of society, and being aware of their needs they meet the demands determined by social challenges with new or novel solutions.

Zapf (1991) understands under innovation the solution of social problems that require the redistribution of resources in order to increase living standards. Smeds (1994) identifies technical innovations as preconditions for and originators of social change. The European Union (EC, 1995) emphasizes the social aspect of innovation, highlighting the creativity of society and its willingness to cooperate. According to Introna et al. (1999) no technological innovation can be created without the renewal of society. Innovation, according to the

“extended” interpretation is a new or significantly improved product, procedure, marketing method or organizational method in business practice and organizations or in relations that encourage cooperation (EC, 2005). The definition primarily provides guidance for technical and economic innovations, however, the programme defining the research & development and innovation policy of the European Union (Horizon 2020) pays a special attention to the definition of social innovations. Hämäläinen and Heiskala (2007) identify social innovations as an answer given in response to rapid technological and economic changes. According to Tidd et al. (2005) the starting point for examining social innovation is the typology of technological innovations: product, process (procedure), positioning and paradigm. Murra et al (2010) studied novel social cooperations, and in their view, the new structures develop their novel social solutions in order to address social problems through technological development. Lundström and Zhou (2011) are of the opinion that economic and technological innovations are basically created in the course of company initiatives but these processes also have social implications. In spite of this, social innovations tend to be defined more at the level of (local) governments, non-profit organizations, foundations and individuals, thus their measurement structure also differs from the measurement methodology of technical innovations. Franz et al. (2012) explore technical and social innovations separately, and they stress how important the question is whether innovations producing new technological achievements are always desirable for society. In their view, the new is not necessarily a desired category, social innovation endeavours are in line with those practices that are widespread and widely accepted in society.

Since 2012 local initiatives and novel collaborations have become the focus of social innovation theories. Neumeier (2012) emphasizes the function of the various development programmes and other measures as catalysts in the catching up processes of lagging settlements. Moulaert et al. (2013) identify social initiatives as ones that lead to the renewal of social relations and government operation with their cooperative, participation-based solutions. Cajaiba-Santana (2014) attributes changes in attitude and behaviour to the social innovation endeavours, which facilitate the appearance of new institutions and structures. In his opinion social transformation produced as a result of social innovation also carries in itself the potential to solve the social problems. Bulut et al. (2013) highlight the significance of the individual level in social initiatives, and they consider the endeavours that are sustainable and respond to the individual’s social development challenges as a new and genuine idea.

When investigating local initiatives, special attention should be paid to the cooperation between (local) government and the civil sphere and the business model based operation of such a cooperation

(Battilana-Casciaro, 2012, Grassl 2012, Unceta et al., 2016). According to Tardif-Harrison (2005) social innovation often starts as a local level process, during which the participants of the innovation process try to restructure their relationship system. Special emphasis has been put on bottom-up initiatives (Nemes-Varga, 2015, Kocziszky-Szendi, 2018, Veresné Somosi-Varga, 2018) because they act as key factors in the implementation of the social innovation endeavours of a given nation (Bulut et al., 2013).

Social innovations are inseparable companions of technical innovations, thus innovations can be interpreted as complementary processes (Drucker, 1985, Freeman, 1988, Bulut et al., 2013, Kocziszky et al., 2015, Varga, 2017). New innovative bases, such as the area of social innovations, help the implementation and effectiveness of technical innovations, and at the same time, by increasing each other's strength, they are able to react to the current challenges of society (Varga, 2017). The successful implementation of social innovation is relative to cultural acceptance, economic sustainability and technological applicability (Bulut et al., 2013). Social innovation and technical (economic) innovation are closely interrelated (Varga et al., 2020). Technical and social innovation together, complementing each other, are able to ensure the well-being of society.

Social challenges that require long-term solutions (e.g. unemployment, migration, disadvantaged areas) demand novel social cooperations. Social innovation is a necessary step to achieve development and enhance competitiveness, in which the role of innovators is significant. The innovators are members of the local community, or in a broader sense, of society, and being aware of their needs they meet the demands determined by social challenges with new or novel solutions. In the course of our investigations we pay special attention to the most disadvantaged areas and to the examination of their opportunities helping them to catch up. In the case of the lagging villages/towns of the district it is absolutely necessary to introduce novel cooperations, identify and accurately satisfy local needs, involve citizens in local decisions, and analyze the impact of social innovation endeavours on raising the living standards.

There is a correlation between the economic output and the innovation capability of a given area (Kocziszky-Veresné Somosi, 2016). Innovation (looking for new and novel solutions), however, should be interpreted in a broader sense than before. The European Union, in line with social changes, pays more attention to the correlations of social innovation than previously.

A change of paradigm is required. In addition to the technical and scientific R&D activities requiring increasingly high expenditure, there is a growing need for new and novel solutions suitable for managing the social and economic problems of small communities (settlement, region). Each type of innovation has a social implication, the different types of innovation are

interrelated and they lead to the transformation of economic and social relations. Bulut et al. (2013) claim that social innovation exerts a direct influence on technical innovations because it is able to provoke a change in education, health care, employment, and social development in general. Accordingly, social innovation is a complement to and a trigger for technical innovation.

We started out from a statement in literature, according to which social innovation tries to meet the social needs that the market is not able to satisfy, thus it may as well be an alternative solution in the catching up of peripheries (Kocziszky et al. 2015, Szörényiné, 2015; Benedek et al. 2016, Kocziszky-Szendi, 2018). We assumed that in the case of peripheral areas catching up may be assisted by both generally used and special social innovation solutions. General social innovation solutions mean in this context, solutions used (also) somewhere else, operating efficiently as part of a complex program after the adaptation of the practice, while taking into account local needs and conditions. Contrary to that, special solutions are defined by the members of the relevant community as the result of innovative cooperations and structures that improve the social innovation capability of the relevant settlement as a single solution.

Known examples of special solutions, relating to the relevant local government:

1. Alsómocsolád: the enterprising village

Alsómocsolád is a settlement with a population of 376, situated in one of the multiply disadvantaged districts of Hungary, in the northern corner of the most southern county of Hungary. The local government considers the village a living organism, and it established wide-ranging partnership relations with the citizens of the local government, the civil society organisations, the employees of its institutions and business companies, the actors of economic life and the neighbouring local governments. Planning is always based on grassroots (bottom-up) initiatives. During work it combines "local knowledge" with the high-level professional knowledge of external experts (NFGM, 2010).

2. Hernádszentandrás: the self-sustaining village

Hernádszentandrás, located in the Northern-Hungarian Region is a settlement with 425 inhabitants in one of the most disadvantaged districts. The mayor's high priority was the creation of workplaces in the village, as a result of which, currently vegetables are produced and sold under the brand name of BioSzentandrás, and people are engaged in organic farming, which increases the market value of the raw materials produced (Lipták-Horváth, 2018). At present, work opportunities are provided for 25-30 people.

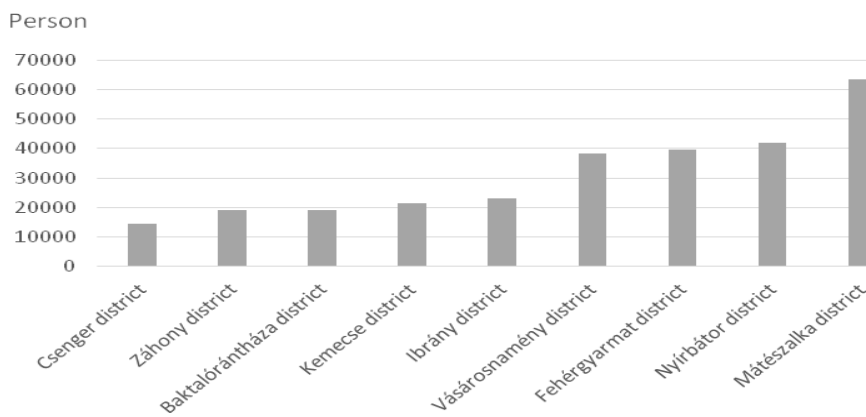
3. Cégénydányád: Have a piglet! (for Hungarians it means "Good luck to you!")

Cégénydányád, with its 641 inhabitants, is situated in one of the most disadvantaged districts of the eastern part of Hungary. The program implemented with the support of the local government has offered pig-keeping possibilities for the program participants since 2015. With the program the local government responded to local needs (employment, development of tourism). The main aim of the initiative was to create workplaces. The local government cooperates with social enterprises, citizens and civil and economic organisations in a novel way.

STUDY: MATERIAL AND METHOD

The examined Nyírbátor District belongs to the least developed districts of Hungary. According to the complex development indicator designed to measure the development level of districts (KSH - Central Statistical Office), this district does not reach even 60% of the average number characteristic of Hungary. Government Decree No. 290/2014 (XI. 26.) and

Government Decree No. 106/2015 (IV. 23.) amending it, separate the districts that are at the end of the development ranking list and have to be developed with a complex program and supported with a special system of instruments. The districts to be developed with the complex program are situated in the peripheral part of the country, and a significant number of them are border districts (23 districts). More than 60% of the population of the districts to be developed with the complex program live in Szabolcs-Szatmár-Bereg, Hajdú-Bihar and Borsod-Abaúj-Zemplén counties (KSH, 2016). Most of the districts to be developed are in Szabolcs-Szatmár-Bereg County located in the eastern part of Hungary, altogether 9 districts need catch up programs implemented based on comprehensive plans. Every other citizen of Szabolcs-Szatmár-Bereg County lives in a district that needs complex development. The population of the 13 districts of the county exceeds 552 000, of which altogether nearly 270 000 people live in the 9 districts to be developed with the complex program.



Source: authors' editing (based on KSH data)

1.1. Population of the districts in Szabolcs-Szatmár-Bereg County to be developed with the complex program (per person)

Nyírbátor District is situated in the northern-eastern part of Hungary, in the southern part of Szabolcs-Szatmár-Bereg County, which can be considered the periphery of Hungary. The examined Nyírbátor District has an area of 696 km², and it is composed of 20 settlementsⁱ. The population of the district is 42 998 (on 1 January 2019). In terms of population and number of settlements Nyírbátor District can be considered a medium-sized district among the districts of Szabolcs-Szatmár-Bereg County.

Nyírbátor District takes the 13th place in the ranking of districts to be developed with the complex program, and it includes three towns (Nyírbátor, Nyírlugos, Máriapócs) and 17 villages. Its complex indicator is 27.15, which does not reach even 60% of the 46.68 average.

The research on Nyírbátor District was conducted based on the analysis of available statistical data (TEIR, KSH) and interviews with experts. On the basis of the qualitative interviews made with the mayors and experts from the economic and civil sphere, it can be stated that the district includes disadvantaged settlements, which are confronted with significant challenges. Social innovation efforts play an outstanding role in the management of these challenges, and their successful implementation possibilities are examined by this study.

The research consists of two parts:

- statistical analysis,
- interviews with experts and analysis of the interviews.

By means of the interviews with experts (20 semi-structured interviews) we visited each administrative

area at least once in 2019, and basically we examined five groups of questions in Nyírbátor District according to the following topics:

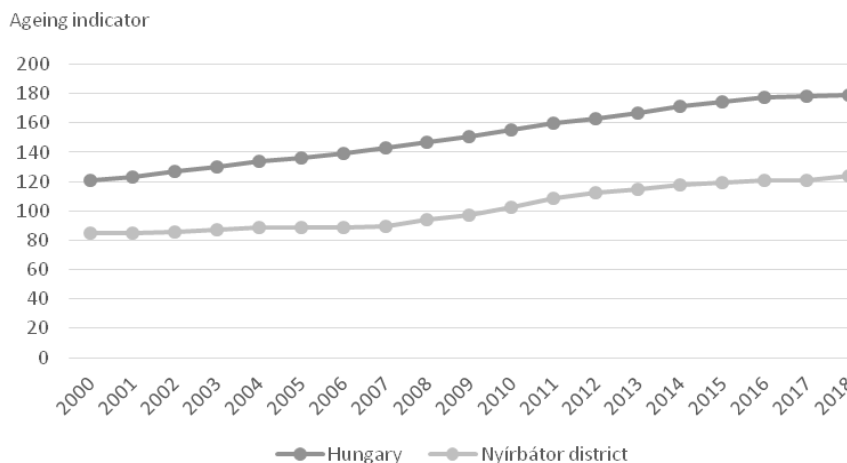
- general information on the settlement,
- implemented social innovations,
- planned social innovation efforts
- successes and obstacles,
- regional (area) cooperations (and their opportunities).

We made the 60-90-minute interviews with members and leaders of the groups who are experienced in community matters or have a determining opinion of them (mayor, notary, leaders of civil society organisations, church leader and heads of the enterprises operating at the village or town). We recorded the interviews by Dictaphone and took notes in a notebook. The research log contains nearly 30 hours of audio materials and 92 handwritten pages.

ECONOMIC AND SOCIAL CHARACTERISTICS OF NYÍRBÁTOR DISTRICT

The most disadvantaged districts are different from the other districts in terms of their demographic characteristics. In the districts to be developed with the complex program a higher ratio of children (0-14 years of age) and a lower ratio of the elderly (60-x years of age) tend to be typical, on the whole (KSH, 2016). In the case of districts to be developed with the complex program the ageing indicator (population aged 60-x years per 100 children aged 0-14 years) is significantly lower than the national average. An outstandingly high ratio of the children's age group is characteristic of the districts of Szabolcs-Szatmár-Bereg County. In these areas the ratio of the elderly is lower, and the districts have a young age structure. The ageing indicator of Nyírbátor District was 124 in 2018, which does not reach 70% of the national average (179).

The demographic characteristics of young age-structured districts (such as Nyírbátor District) are influenced by ethnical features, i.e. the significant proportion of Roma nationals.

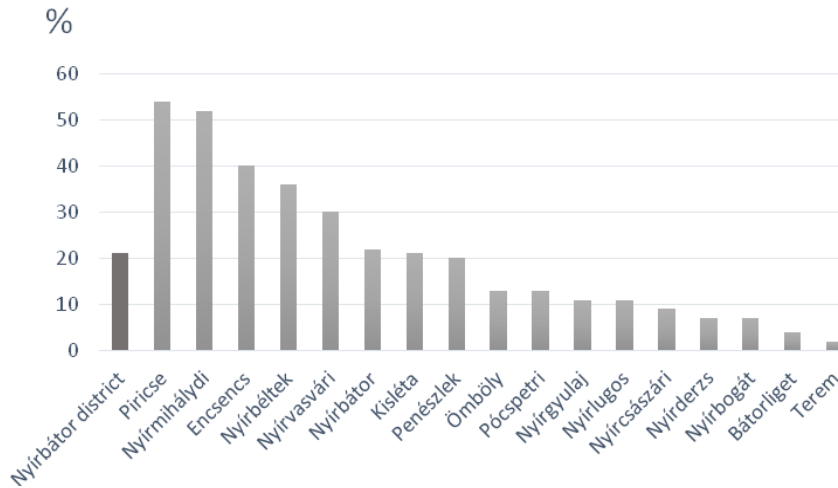


Source: authors' editing (based on KSH data)

2.2. Number of people aged 60-x years per 100 children aged 0-14 years from the permanent population

Significant factors relating to special ethnical features are unfavourable rate of deaths (low ratio of the elderly), high fertility rate, low level education and low rate of employment, which are also apparent in the case of Nyírbátor District. Regarding the number and

ratio of the Roma population, it can be stated, based on the estimates of notaries, that one fifth of the inhabitants are of Roma origin at least in eight settlements of the district (Farkas, 2012).



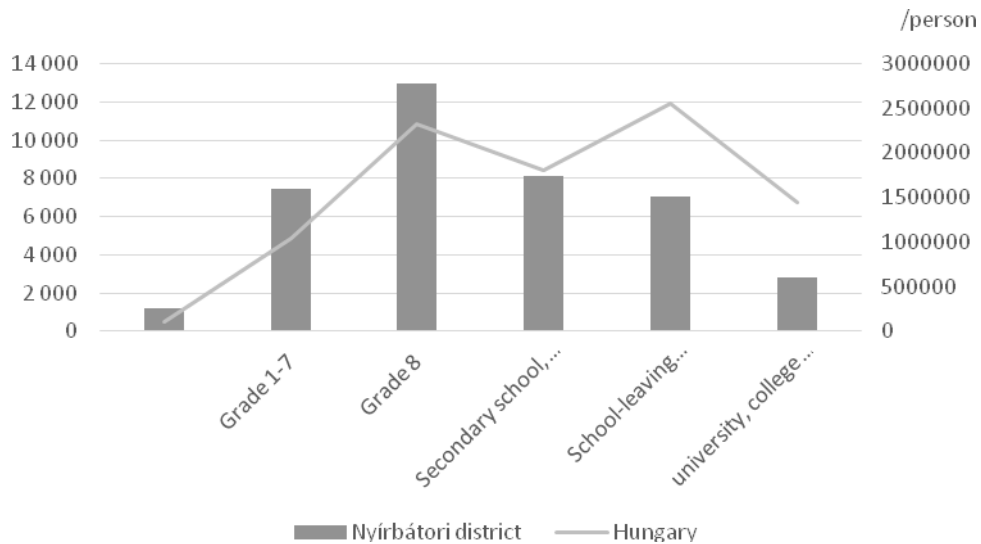
Note: There are no available data for Máriapócs, Nyírgelse and Nyírpilis
 Source: authors' editing (based on Farkas, 2012)

3.3. Estimated proportion of the Roma population in the settlements (notary datasheets)

Apart from the significant proportion of the Roma population, a critical factor is the acceleration of the out-migration of the non-Roma population and the young skilled workforce (selective migration).

Based on the data of the census of 2011, 54% of the population aged 7 and older completed at most the 8th grade of the primary school in Nyírbátor District

(national average: 37%). As opposed to that, the ratio of people with a higher educational degree is 7.1% in the district, which is lower than half of the national average (15.5%). The ratio of those with a secondary school-leaving exam certificate is also significantly lower in Nyírbátor District (17.7%) than the national average (27.5%).

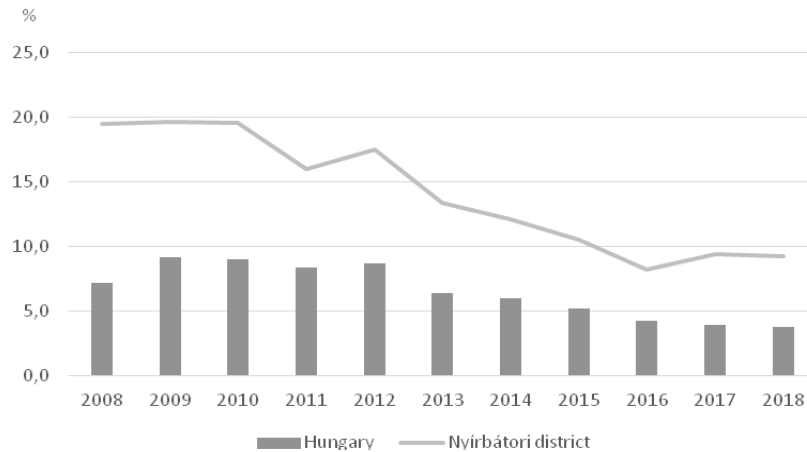


Source: authors' editing (based on KSH data)

4.4. Population aged 7 and more by the highest completed education level

The rate of the unemployed was 3.7% nationally in 2018, whereas in Nyírbátor District it reached 9.3%. Between 2008 and 2016 the rate of unemployment

decreased both at national level and in the district, but after 2016 the value started to rise again.

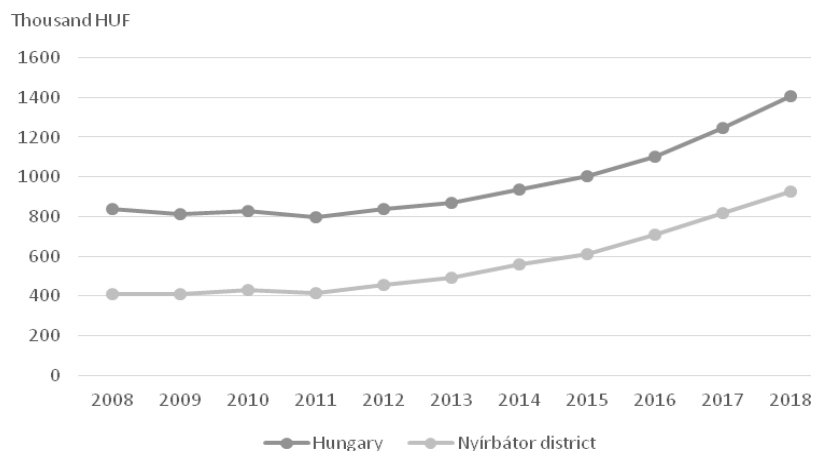


Source: Authors' editing (based on KSH data)

5.5. Rates of unemployment in Nyírbátor District

A comprehensive picture can be obtained about income discrepancies at district level based on the income constituting the personal income tax base (hereinafter earnings). In our investigation we analyzed the amount of earnings and their relation to the national

average. In 2018 the average annual earnings per permanent inhabitant amounted to 926 thousand forints in Nyírbátor District, which did not even reach 2/3 of the national average.



Source: Authors' editing (based on KSH data)

6.6. Annual earnings per inhabitant (thousand HUF)

The significant lagging behind is due to the low ratio of the employed and the low level of incomes. In 2018 there were 509 tax-payers per one thousand inhabitants on the average, which is, in the case of Nyírbátor District, approximately 90% of the above value.

Nyírbátor District is also lagging in terms of its technical infrastructure. The distance of the capital city is rather considerable (255-350 km), which distance may mean even 5 hours travelling time by railway (typically with 1-3 transfers). On road it takes about 3 hours to cover this distance due to the closeness of the motorway, however, the number of car owners per one thousand people is lagging behind the national average by almost 20% (KSH).

The process of lagging has created a paradoxical situation in the area. On the one hand, there is strong social pressure placed on local inhabitants to involve them in social processes, and on the other hand, the area has scarce financial and human resources available.

The special characteristics of peripheral areas include ageing and migration. In addition to the problem of unemployment, these communities also lack financial resources, which makes it more difficult to involve the inhabitants in decisions. These unfavourable processes induce a double stigmatization process (Döringer, 2017):

- on the one hand, internal stigmatization from the inhabitants (e.g. leaving them out of public work or decision-making),
- on the other hand, external stigmatization from the inhabitants observing the area from outside (e.g. due to the negative news of the media).

POINTS OF FOCUS OF THE SOCIAL INNOVATION ENDEAVOURS SUPPORTING CATCHING UP

Based on the interviews with experts, it is found that in the case of the disadvantaged settlements of Nyírbátor District, social innovation appears in the form of a model and it determines the success of the catching up process in that form. The basic criterion of the social innovation process is that the endeavour should be a novel initiative. This does not necessarily mean a completely new solution, but a novel combination of schemes that had already worked well, which satisfy the existing social needs. Social innovation is not a linear but a spiral-shaped process with feedback loops. After the successful implementation of the endeavour, new needs will emerge that the socially innovative community is able to satisfy by following the process described above. Thus social innovation is a dynamic process resulting in social learning with the help of feedback loops and constant risk assessments (Varga, 2018).

The endeavours/efforts basically respond to local needs, they address the challenges impacting the inhabitants in the form of creative problem-solving and novel cooperation, and they bring about higher living standards and well-being.

Based on the above, the main points of focus of the current social innovation endeavours of the district are aligned with the critical areas identified during the investigation:

- education (providing high quality and tailored to needs),
- employment (labour market programs based on personal mentoring),
- health (improvement of the state of health and prevention),
- housing (improvement of housing conditions)

It is rather complex to identify the cause-and-effect relationships between the factors as their impacts exerted on each other and their sequence are not clear-cut, but it can be stated that if a disadvantaged citizen's housing conditions are inadequate, it can lead to health problems. Health problems can cause learning difficulties, which may lead to reduced productivity at

work, which may result in the deterioration of housing conditions. The necessary steps are to improve housing conditions, encourage retail services to meet local needs, increase the proportion of community programs and spaces, and expand community and social services. In addition, the establishing of appropriate transport conditions should also be emphasized, but the improvement of physical infrastructure alone is not sufficient for increasing the social welfare of the inhabitants. Taking into account the disadvantaged situation of the district, it is indispensable to have social innovation endeavours to increase the living standards of society. Within the framework of social innovation, the local government has a prominent role. In cooperation with the enterprises and civil society organisations of the settlements, it helps the implementation of training and labour market programs, and facilitates accessibility to social services and public information through innovative initiatives and programs. We examined several innovative activities of the measures that are new in the life of the relevant settlement and are different from the traditional self-government model. The town management with its traditional local governance is slow and is lagging behind in comparison to the initiatives based on active participation, thus it is necessary to define a local government model. The new local government model is cooperative and consultative, involving the inhabitants of the settlement in decision making.

The study presents a case, already implemented and working successfully, in line with the above points of focus, which could be the main activating factors of the social innovation processes in the district. It can be stated that the individual points of focus are interrelated, and the initiatives created to address certain issues often tend to lead to further social innovation efforts.

In the centre of the district (Nyírbátor) a complex program was launched in 2015 to support disadvantaged groups and achieve catching up. The Nyírbátor program mainly supports the education and employment of Romas. The identification of short and long-term goals help the Romas to be integrated into work. The participants of the subprogram (local government, business sector representatives, civil society organisations) defined, as a first task, the long-term objectives, then the shorter-term activities that ensure achieving the objectives set.

In the case of disadvantaged inhabitants the area of education is a critical point, and in this respect the following target structure was defined:

*Short-term and long-term objectives defined in the area of education in Nyírbátor***EDUCATION OBJECTIVES**

SHORT-TERM OBJECTIVES	LONG-TERM OBJECTIVES
<ul style="list-style-type: none"> - improve communication - preserve Roma values and culture - involve parents in school programs - organise family visits and provision of help - mentoring (mentors of Roma origin) - organise programs helping to assume responsibility for themselves - set up a computer workshop - teach health education as a school subject - organise life coaching programs for parents 	<ul style="list-style-type: none"> - provide training tailored to individuals' abilities - organise integrated education - motivate parents and children continuously and efficiently - reduce and stop dropping out of school - support cooperation between the institution and parents - eradicate prejudices

Source: authors' editing (based on Veresné Somosi-Varga, 2018)

Due to the innovative cooperation, the local government defined specific actions and tasks related to the activities for short and long term. The enterprises help the implementation process with various training programs, information, scholarship and mentoring programs, whereas the local government, apart from preparatory work and mentoring, supports catching up by employing mediators (mediators of Roma and non-Roma origin). The training of Roma mediators and their inclusion in the program makes it possible to improve relations between Roma parents and the kindergarten or school, between Roma parents and teachers, and between Roma and non-Roma parents. A sort of perspective-shaping takes place regarding the importance of learning and the increase of Roma children's chances for a successful life

When examining the objectives of education, the key objective can be identified as developing the inhabitants' skills, knowledge of information, and their awareness (The World Bank-EC, 2015). The efforts primarily focus on training, during which the disadvantaged inhabitants' cognitive and non-cognitive skills are improving. Life management programs strengthen motivation (self-evaluation, interpersonal

relations) and develop social and job-seeking skills. These are complemented with the mentoring process, during which the mediators (basically of Roma origin) help the disadvantaged groups to get access to educational and labour market services by improving communication and managing conflicts through active participation. The initiatives are based on the inclusion of the Roma inhabitants by sharing kindergarten and school tasks. Parental support provided in pre-school and primary school years significantly influences the future opportunities of the child. The regular meetings between parents and the institution, provision of advice, parents' support groups and the shared activities also contribute to the development of the children's learning skills. The provision of advice and the information programs on healthy lifestyle and prevention and on how to avoid risky forms of behaviour increase the awareness of the disadvantaged groups.

Besides raising the level of education, and ensuring it, there is also emphasis placed on the implementation of labour market programs designed to encourage employment.

*Short-term and long-term objectives defined in the area of employment in Nyírbátor***EMPLOYMENT OBJECTIVES**

SHORT-TERM OBJECTIVES	LONG-TERM OBJECTIVES
<ul style="list-style-type: none"> - information on available training possibilities and occupations - present positive examples (with the involvement of Romas) - start vocational training according to the needs of employers - provide mentoring at the workplace - organise talent development - operate a scholarship system - keep continuous contact with the relevant people 	<ul style="list-style-type: none"> - presence of Roma employees in all areas of the labour market - open-minded and welcoming employers - realize equal opportunities on the labour market - eliminate labour market discrimination - provide well-prepared, motivated, disciplined, purposefully trained workforce

Source: authors' editing (based on Veresné Somosi-Varga, 2018)

The objectives defined emphasize the creation of a comprehensive local employment program (The World Bank-EC, 2015). Provision of information and advice, mentoring and support are fundamentally important for the disadvantaged inhabitants not having appropriate information, network of contacts and job-seeking skills. As the Roma origin is often a disadvantage on the labour market it is necessary to have consultations and forums with the involvement of Romas and employers mediated by mediators. The various scholarship programs play a prominent role among the objectives. In addition to taking into account the disadvantaged position, the scholarship model built on performance evaluation supports the employment and dual training of students studying in secondary and higher education.

The novelty of the endeavours is that the elaboration of the programs was preceded by different professional forums, round-table discussions (businesses – local government – disadvantaged inhabitants), and open days. These are socially innovative solutions that are based on real social dialogue and partnership, and during which partnership goes beyond the usual forms and really active reflection, thinking together is produced. In this process cooperation among the village/town leader(s), the inhabitants, the enterprises and the civil society organisations have an outstanding role. During cooperation willingness and confidence are key issues (Vilmányi-Hetesi, 2017, Vilmányi, 2019). It is a condition for the implementation of social innovation if a given community is able to see the social phenomena in a novel way, transform their practices, and newly configure its relationship system.

In the case of the example in Nyírbátor it is worth pointing out specifically the innovator role of the town management, and primarily that of the mayor. The mayor, like Schumpeter's former "entrepreneur", takes part in the process of innovations as an innovator alongside a new cooperation and structures. In order to generate social innovation endeavours, it is also necessary, in the case of settlements, for the innovator(s) to have internal dedication and courage, take into account bottom-up initiatives, to use the cohesion force of the common past and traditions, to have expertise, to involve the stakeholders and follow good practices.

THE GOOD PRACTICE OF SOCIAL INNOVATION

The activities implemented as part of the complex program started in Nyírbátor in 2015 were closely interrelated, and their aim was to increase the level of education and employment. Focusing on the special ethnic features, the town's endeavour is to improve the quality of the relationship between Romas and non-

Romas and to achieve a kind of perspective-shaping with the help of the program. Putting the town on a long-term growth path clearly depends on the comprehensive management of the problems of disadvantaged inhabitants and their social integration. For this purpose, when the town involves its inhabitants, it primarily uses the methods of community planning, forums for consultations and workshops. During the program it can be observed that the challenges of critical areas (education, employment, housing, health) are addressed in a complex way. One of the exemplary practices of the initiatives realized in the district seat of Nyírbátor District is the Good Start Program launched in 2015. The introduction of the program was preceded by and is continuously supported by the cooperation of local specialists, the exchange of experiences and knowledge expansion of the experts keeping contact with the children and their families. In the course of the implementation of the program working groups were set up, which provide the common platform needed for the dialogue. The workshops offer a scene where the viewpoints of the specialist areas involved can appear, conflicting opinions can be discussed, their knowledge can be presented, common lessons can be drawn, which helps individual and joint work in the interest of improving the situation of the children and their families. The aim is to pass on the good practices to each other, mutually learn from each other and transfer experiences. The leaders of specialist workshops draw up a schedule of topics based on the proposals of the members and they meet half-yearly. On such occasions, the workshops held at alternating venues provide a good opportunity for discussing unique, special problems, give professional assistance to each other and feel more relaxed about asking for help or information from each other.

Main elements of the program:

- improve access to quality education services and early childhood care service,
- notify and inform Roma parents about the significance of early childhood services and kindergarten education,
- 'Fairy Tale World' Program to improve Roma mothers' reading, writing and communication skills,
- facilitate Roma children's enrolment to the kindergarten with the help of Roma mentors,
- support adaptation to kindergarten with the help of kindergarten teachers and health visitors,
- facilitate transition between educational levels, further training organised by the college through lectures for college students and kindergarten teachers (conflict management, communication, keeping contact with parents).

Good Start Program in Nyírbátor

General Information	Name/Address	Good Start
	Contact person	Nyírbátor, local government
	Aim	To implement scientific evidence-based, result-oriented early childhood interventions in a disadvantaged community, mainly of Roma origin.
	Target group	Disadvantaged inhabitants of Nyírbátor (with special regard to inhabitants of Roma origin)
	Target region	Nyírbátor
	Required human resources	150 people (families, college students being trained to be health visitors)
	Financing	project competition sources, local government support
	Required infrastructure	real estates, internet, training sessions of conflict management and communication
Description of the practice	Brief presentation / needs identification	Improving the access to quality education services and early childhood care services for disadvantaged Roma children (age group of 0-6 years). Notifying and informing Roma parents within the framework of the program about the significance of early childhood services and kindergarten education by employing a mentor receiving dedicated training specifically for this purpose. In line with that, the final aim of the project is to lay down the foundation for success at school.
	Presentation of implementation	<ul style="list-style-type: none"> - Dissemination of the 'Fairy Tale' Program (age group of 0-9 years, appr. 105 mothers): Improving Roma mothers' reading, writing and communication skills through fairy tale telling, which the mother will be able to pass on to her children. The program prepares mothers for tasks related to kindergarten, for taking 3-year-old children to kindergarten, for teaching their children how to follow a healthy lifestyle. - Facilitate Roma children's enrolment to the kindergarten: supporting the enrolment of children aged between 3 and 6 to the kindergarten with the help of Roma mentors. The mentors' tasks will include conducting Roma community awareness-increasing campaigns, providing special family-support services (e.g.: individually tailored social mentoring), regular family visits in order to encourage children taking part in the program to go to kindergarten and to monitor the tasks of enrolling into the kindergarten. College students, in close cooperation with Roma advisors, will also participate in this activity. - Facilitating transition between educational levels, further training organised by the college through lectures for college students and kindergarten teachers (conflict management, communication, keeping contact with parents).
	Results, outputs, future ideas	involvement of a total of appr. 50 families, 33 events and lectures
	Identified problems and lessons	resistance, challenges of attitude shaping
Why can it be a good practice?	Area-based approach	In the case of the disadvantaged children of Nyírbátor, neither the family nor the school can create appropriate conditions for adaptation at the kindergarten.
	Bottom-up approach	The practice clearly focuses on local social challenges, involving local inhabitants into the implementation.
	Partnership approach	Cooperation of local government, civil society organisations and local inhabitants
	Innovation	Partnership steps out of usual forms and really active reflection, thinking together is produced.
	Integrated approach	The practice manages the social challenges of the settlement in a complex way (it also impacts employment, not only education)
	Publication / networking	appearance in electronic media, project presentation
	Sustainability	The project responds to real challenges, it reached a total of appr. 100 families.
Adaptability	Local special features and priorities can be identified as emphatic factors. The framework conditions designed to improve local living conditions jointly result in catching up. Identification of the stakeholders of the process, the role of communication (information), the planning of financial resources, the attempts at changing attitudes, and the institutional background are of key importance.	

Source: Authors' editing (based on Szabó-Nagy, 2014)

The use of the documentation principles, defined on the basis of the groups of criteria, supports the process of adaptation, which is critical in the successful implementation of social innovation endeavours.

After studying the accomplished endeavour in Nyírbátor District, it can be found that in addition to external help (project competition sources, professional advice) it is necessary to mobilise local inhabitants, set up a novel cooperation and think together in new structures. Basic requirements are creative problem solving, innovative management of challenges, exact mapping of community needs and reaction to these. The break-out points should be defined in the case of the individual settlements, also taking into account the set of conditions of the given settlement. By involving the local community as partners and emphasizing the innovator role of local management, social innovation good practices can be supported and implemented with success.

CONCLUSION

When examining social innovation initiatives, the social benefit realized in the innovation ideas that can be interpreted at local, community level and the role of the community's active participation to increase the living standards should also be stressed. The new social practices are aimed at a social change based on activities that encompass solutions, are pre-planned and target-oriented (Cajaiba-Santana, 2014).

Nyírbátor District is a peripheral area where out-migration, ageing and the decrease in the opportunities for entering the primary labour market are coupled with the lack of financial resources. The technical and economic innovations and the initiatives controlled from the top, so characteristic of more developed areas, can hardly be found here or are completely missing in the peripheral, disadvantaged areas.

In the case of disadvantaged, lagging settlements, the active participation in decision making and the mobilisation of civil society are key issues, one tool of which is to help social innovation endeavours/efforts. The success of social innovation initiatives significantly depends on regional or local collaborations, networks, the support of which is a

basic task for the local governments of the relevant area. Decision-making based on the involvement of local inhabitants is a change of paradigm in the operation of local governments, which qualifies as social innovation in itself.

Within the framework of the research, we mainly examined the realization of micro-level social innovation processes. A limitation of the research in terms of generalization is that we conducted our research in the Nyírbátor district to be developed with the complex program, starting from the assumption that in the case of multiple disadvantaged areas, social innovation as a new tool and model offers solutions to social challenges and problems.

Based on the research, it can be stated that the commonly used social innovation solutions are suitable for developing the innovation capacity of the Nyírbátor district. There is no single good solution, any of the examined practices can be adapted to other settlements. All these findings predict that a so-called library of good practices can provide practical advice to decision-makers, participants in the social innovation process.

Further research is needed to support the generation of social innovation endeavours. In our previous research (Veresné et al., 2019) we came to the conclusion that due to the huge amount of data in the database supporting the generation of social innovation, it is expedient to use an IT solution, ie. it is necessary to introduce a support system. As a result of our methodological study, we support the application of fuzzy logic. The fuzzy system can handle multiple data types simultaneously and can be perfectly combined with decision trees. The database needs to be constantly updated with new good practices and statistics and can be documented along a defined set of criteria.

Our further research task is to define a value-driven training model that supports the generation and realization of social innovation, and to build a network of consultants.

Further investigation of the above research directions may result in the exploration of important connections, which may complement the investigations carried out in the framework of the present study.

Acknowledgement

This research was supported by the project no. EFOP-3.6.2-16-2017-00007, titled "Aspects on the development of intelligent, sustainable and inclusive society: social, technological, innovation networks in employment and digital economy". The project has been supported by the European Union, co-financed by the European Social Fund and the budget of Hungary.

REFERENCES

- BATTILANA, J. – CASCIARO, T. (2012): Change Agents, Networks, and Institutions: A Contingency Theory of Organizational Change, *Academy of Management Journal* Vol. 55, Nr. 2, pp. 2-41., <https://doi.org/10.5465/amj.2009.0891>
- BENEDEK, J. – KOCZISZKY, GY.- VERESNÉ SOMOSI, M. – BALATON, K. (2016): Generating and Measuring Regional Social Innovation, *Theory Methodology Practice*, Vol.12, Special Issue, pp. 14-25., <https://doi.org/10.18096/tmp.2016.02.02>
- BULUT, C. – EREN, H. – HALAC, DS. (2013): Social Innovation and Psychometric Analysis, *Procedia – Social and Behavioral Sciences* 82. pp. 122-130., <https://doi.org/10.1016/j.sbspro.2013.06.235>
- CAJAIBA-SANTANA, G. (2014): Social innovation: Moving the field forward. A conceptual framework. *Technological Forecasting and Social Change*, 82, pp. 42-51., <https://doi.org/10.1016/j.techfore.2013.05.008>
- DAWSON, P. M. - DANIEL, L. (2010): Understanding social innovation: a provisional framework. *International Journal of Technology Management*, 51 (1), pp. 9-12., <https://doi.org/10.1504/ijtm.2010.033125>
- DÖRINGER, S. (2017): Is Social Innovation a Key to "De-Peripheralization"? Dealing with Challenges of Peripheralization on a Local Level, <http://epub.oeaw.ac.at/0xc1aa5576%20x0039109b.pdf>
- DRUCKER, P. (1985): *Innovation and entrepreneurship*, Harper & Row, Publishers, New York
- EC (1995): Green paper on innovation, https://europa.eu/documents/comm/green_papers/pdf/com95_688_en.pdf
- EC (2005): Towards a European research area: science, technology, and innovation key figures, Office for Official Publication of the European Communities, Luxembourg
- FARKAS, ZS. (2012): Nyírbátori kistérség, Szabolcs-Szatmár-Bereg megye, Észak-alföldi régió – Kistérségi helyzetelemzés, MTA TK, Gyerekesély-kutató Csoport (Nyírbátor micro-region, Szabolcs-Szatmár-Bereg county, Northern Great Plain region - Micro-regional situation analysis, Hungarian Academy of Sciences, Childhood Research Group), https://gyerekesely.tk.mta.hu/uploads/files/Kistersegi-tukor-Nyirbator_gyek-template.pdf
- FRANZ, H.-W. – Hochgerner, J. – Howaldt, J. (szerk.) (2012): *Challenge Social Innovation*, Springer-Verlag Berlin, Heidelberg, <https://doi.org/10.1007/978-3-642-32879-4>
- FREEMAN, C. (1988): Japan: A new national innovation system? In: Dosi, G. et al. (eds.): *Technology and Economy Theory*, London, Printer, <https://doi.org/10.1093/0198290969.001.0001>
- GRASSL, W. (2012): Business Models of Social Enterprise: A Design Approach to Hybridity, *ACRN Journal of Entrepreneurship Perspectives*, Vol. 1, Issue 1, p. 37 – 60.
- GRIMM, R. – FOX, CH. – BAINES, S. – ALBERTON, K. (2013): Social innovation, an answer to contemporary societal challenges? Locating the concept in theory and practice, *Innovation: The European Journal of Social Science Research*, Volume 26, Issue 4, pp. 436-455., <https://doi.org/10.1080/13511610.2013.848163>
- HÄMÄLÄINEN, T. J. (2007): Social innovation, structural adjustment and economic performance, In: *Social Innovations, Institutional Change and Economic Performance* (ed. Hämmäläinen, T. J. – Heiskala, R.), Sitra, The Finnish Innovation Fund, <https://doi.org/10.4337/9781847206992.00008>
- HAZEL, KL. - ONAGA, E. (2003): Experimental social innovation and dissemination: the promise and its delivery, *Am J Community Psychol*, 32(3-4), pp. 285-294., <https://doi.org/10.1023/b:ajcp.00000004748.50885.2e>
- INTRONA, L. D. – MOORE, H. – CUSHMAN, M. (1999): *The Virtual Organisation – Technical or Social Innovation? Lessons from the Film Industry*, Working Paper Series, Department of Information System, London School of Economics and Political Science, <http://www.bioteams.com/Virtual%20Enterprises%20and%20the%20Film%20Industry%20Paper.pdf>
- IONESCU, C. (2015): About the conceptualization of social innovation, *Theoretical and Applied Economics*, Volume XXII, No. 3 (604), Autumn, pp. 53-62.
- KOCZISZKY GY. – SZENDI D. (2018): Regional Disparities of the Social Innovation Potencial in the Visegrad Countries: Causes and Consequences, *European Journal of Social Sciences, Education and Research*, Volume 12, Nr. 1, pp. 35-41., <https://doi.org/10.2478/ejser-2018-0004>
- KOCZISZKY GY. – VERESNÉ SOMOSI M. (2016): Generating social innovation with knowledge engineering. *Procedia - Social and Behavioral Sciences*, 223, pp. 167–174., <https://doi.org/10.1016/j.sbspro.2016.05.341>
- KOCZISZKY GY. – VERESNÉ SOMOSI, M. – BALATON, K. (2015): Társadalmi innováció mérésének sajátosságai (Peculiarities of measuring social innovation), In: „Mérleg és Kihívások” IX. Nemzetközi Tudományos Konferencia, Konferencia Kiadvány (szerk.: Lipták Katalin), pp. 288-301. (In: “Balance and Challenges” IX. International Scientific Conference, Conference publication Miskolc)
- KOCZISZKY GY. – VERESNÉ SOMOSI, M. – BALATON, K. (2017): A társadalmi innováció vizsgálatának tapasztalatai és fejlesztési lehetőségei (Experiences and development opportunities of social innovation research), *Vezetéstudomány (Budapest Management Review)*, XLVIII. évf., 6-7. szám, pp. 15-19., <https://doi.org/10.14267/veztud.2017.06.02>
- KÖZPONTI STATISZTIKAI HIVATAL (CENTRAL STATISTICAL OFFICE) (2016): A komplex programmal fejlesztendő járáások jellemzői (Characteristics of districts to be developed with a complex program), <http://www.ksh.hu/docs/hun/xftp/idoszaki/pdf/kompjar14.pdf>

- LIPTÁK, K – HORVÁTH, K. (2018): Társadalmi innovációk szerepe a foglalkoztatáspolitikában és a vidékfejlesztésben (The role of social innovations in employment policy and rural development), *Észak-magyarországi Stratégiai Füzetek*, 15. évfolyam 3. szám, pp. 55-68.
- LUNDSTRÖM, A. – ZHOU, C. (2011): Promoting innovation based on social sciences and technologies: The prospect of a social innovation park, *Innovation: The European Journal of Social Sciences Research*, 24:1-2, pp. 133-149., <https://doi.org/10.1080/13511610.2011.583864>.
- MAGYAR KÖZLÖNY (HUNGARIAN GAZETTE) (2015): 290/2014. (XI. 26.) Kormányrendelet a kedvezményezett járáások besorolásáról, valamint 106/2015. (IV. 23.) módosító Kormányrendelet, 56. szám, Government Decree on the classification of beneficiary districts and 106/2015. (IV. 23.) amending Government Decree, No. 56), <http://www.kozlonyok.hu/nkonline/MKP/PDF/hiteles/MK15056.pdf>
- MOULAERT, F. – MACCALLUM, D. – MEHMOOD, A. – HAMDOUCH, A. (2013): *The International Handbook on Social Innovation*, Edward Elgar Publishing Limited, Cheltenham UK, Northampton, MA, USA, <https://doi.org/10.4337/9781849809993>
- MULGAN, G. – TUCKER, S. – ALI, R. – SANDERS, B. (2007): *Social Innovation – what it is, why it matters and how it can be accelerated*, The Young Foundation
- MURRAY, R. – CAULIER-GRICE, J. – MULGAN, G. (2010): *The Open Book of Social Innovation*, The Young Foundation, London: NESTA – National Endowment for Science: Technology and the Arts
- NAGY, K. – PISKÓTI, I. (2016): Route-Based Tourism Product Development as a Tool for Social Innovation: History Valley in the Cserehát Region, *Theory Methodology Practice*, Vol.12, Special Issue, pp. 75-86., <https://doi.org/10.2139/ssrn.3639494>
- NEMES, G. – VARGA, Á. (2015): Társadalmi innováció és társadalmi tanulás a vidékfejlesztésben – sikerek, problémák, dilemmák, In: „Mérleg és Kihívások” IX. Nemzetközi Tudományos Konferencia, Konferencia kiadvány (szerk.: Veresné Somosi M.), (Social Innovation and Social Learning in Rural Development - Successes, Problems, Dilemmas, In: “Balance and Challenges” IX. International Scientific Conference, Conference publication Miskolc, pp. 434-444.
- NEMZETI FEJLESZTÉSI ÉS GAZDASÁGI MINISZTERIUM (MINISTRY OF NATIONAL DEVELOPMENT AND ECONOMY), (2010): Magyarországi Falumegújítási Díj, 2007, 2009, Településfejlesztési Füzetek (28), (Hungarian Village Renewal Award, 2007, 2009, Settlement Development Booklets) http://www.terport.hu/webfm_send/1823
- NEUMEIER, S. (2012): Why do social innovations in rural development matter and should they be considered more seriously in rural development research? Proposal for a stronger focus on social innovations in rural development research, *Sociologia Ruralis*, 52(1), pp. 48-69., <https://doi.org/10.1111/j.1467-9523.2011.00553.x>
- P. VAN DER HAVE, R. – RUBALCABA, L. (2016): Social innovation research: An emerging area of innovation studies?, *Research Policy* 45, pp. 1923-1935., <https://doi.org/10.1016/j.respol.2016.06.010>
- POL, E. – VILLE, S. (2009): Social innovation: Buzz word or enduring term? *The Journal of Socio-Economics* 38. pp. 878-885., <https://doi.org/10.1016/j.socec.2009.02.011>
- RAASCH, C. ET AL. (2013): The rise and fall of interdisciplinary research: The case of open source innovation, *Research Policy*, Volume 42, Issue 5, pp. 1138-1151., <https://doi.org/10.1016/j.respol.2013.01.010>
- SMEDS, R. (1994): Managing Change towards Lean Enterprises, *International Journal of Operations & Production Management*, Vol. 14, Issue: 3, pp. 66-82., <https://doi.org/10.1108/01443579410058531>
- SZABÓ, B. – NAGY F. P. (2014): Jó gyakorlat koncepció kidolgozása, a jó gyakorlat kiválasztás kritériumainak meghatározása, Regionális Forrásközpontok Országos Egyesülete (Elaboration of a good practice concept, definition of good practice selection criteria, National Association of Regional Resource Centers)
- SZÖRÉNYINÉ KUKORELLI, I. (2015): Vidéki térségeink innovációt befogadó képessége –Egy kutatás tapasztalatai (The capacity of our rural areas to absorb innovation - Experiences of a research, *Tér és Társadalom*, 29. évf., 1. szám, pp. 97-115., <https://doi.org/10.17649/tet.29.1.2686>
- TARDIF, C. – HARRISON, D. (2005): Complémentarité, convergence et transversalité: la conceptualisation de l'innovation sociale au CRISES, *Cahiers du CRISES - Collection Études théoriques - no ET0513 (Complementarity, convergence and transversality: the conceptualization of social innovation at CRISES, Cahiers du CRISES - Theoretical Studies Collection)*
- THE WORLD BANK – EC (2015): Kézikönyv – A roma közösségek életkörülményeinek javítása helyi szinten (Handbook - Improving the living conditions of Roma communities at the local level), IBRD – IDA, WORLD BANK GROUP
- TIDD, J. – BESSANT, J. – BOEDLY, K. (2005): *Managing innovation: Integrating technological, market and organisational change*, John Wiley & Sons, Chichester
- UNCETA, A. – CASTRO SPILA, J. – GARCIA FRONTI, J. (2016): Social innovation indicators, *Innovation: The European Journal of Social Science Research*, pp. 1-13., <https://doi.org/10.1080/13511610.2015.1127137>
- VARGA, K. (2017): Társadalmi innováció az önkormányzatok működésében (Social innovation in the operation of local governments), In: (szerk. Lipták K.): *Társadalmi innováció és felelősségvállalás Észak-Magyarországon (Social innovation and responsibility in Northern Hungary)*, Miskolc, pp. 7-15.

- VARGA, K. (2018): Methodological Challenges in Measuring Social Innovation. In *Emerging Markets Economics and Business. Contributions of Young Researchers*. pp. 273–276.
- VARGA, K. – Nagy, Z. – Tóth, G. (2020): Examination of Social Innovation Potential Characteristics in the Example of Borsod-Abaúj-Zemplén County, *Theory Methodology Practice*, Vol.16, Nr. 1, pp. 65-76., <https://dx.doi.org/10.18096/TMP.2020.01.07>
- VERESNÉ SOMOSI M. – VARGA K. (2018): How does social innovation contribute to solving social problems?- A process-oriented framework for measuring social innovation, *European Journal of Social Sciences, Education and Research*, Volume 12, No. 1, pp. 68-83., <http://dx.doi.org/10.26417/ejser.v5i1.p61-75>
- VERESNÉ SOMOSI M. – VARGA K. – KOCZISZKY GY. (2019): Step by Step for Social Innovation with Neuro-Fuzzy Modelling, *European Journal of Economics and Business Studies* Volume 5, Nr. 1, pp. 13-23., <http://dx.doi.org/10.26417/ejes.v5i1.p13-23>
- VILMÁNYI, M. – HETESI, E. (2017): A bizalom hatása a szervezetközi tanulásra és alkalmazkodásra, In: „Mérleg és Kihívások” X. Nemzetközi Tudományos Konferencia, Konferencia kiadvány (szerk.: Veresné Somosi M.), Miskolc, pp. 22-34. (In: “Balance and Challenges” IX. International Scientific Conference, Conference publication Miskolc
- VILMÁNYI, M. (2019): A társadalmi innováció kérdései. „A digitális gazdaság perspektívái: társadalmi innovációk business és non-business területeken” kerekasztal beszélgetés, Szeged, 2019. november 6.
- ZAPF, W. (1991): The role of innovations in modernization theory, *International Review of Sociology*, 2(3), pp. 83-94.

ⁱ Settlements of the district: Bátorliget (740 people, 33 km²), Encsencs (1921 people, 32 km²), Kisléta (1877 people, 22 km²), Máriapócs (2130 people, 22 km²), Nyírbátor (11 891 people, 67 km²), Nyírbéltek (2910 people, 62 km²), Nyírbogát (3037 people, 55 km²), Nyírcsászári (1192 people, 13 km²), Nyírderzs (656 people, 17 km²), Nyírgelse (1092 people, 28 km²), Nyírgyulaj (2074 people, 36 km²), Nyírlugos (2633 people, 58 km²), Nyírmihálydi (2279 people, 25 km²), Nyírpilis (891 people, 16 km²), Nyírvasvári (1969 people, 28 km²), Ömböly (451 people, 30 km²), Penészlek (1032 people, 37 km²), Piricse (1870 people, 37 km²), Pócspetri (1682 people, 26 km²), Terem (671 people, 49 km²).

